REMARKS

I. Claims

Claims 61-63 and 67-69 are presented for examination. Claims 64-66 have been canceled. Claims 61-63 have been amended to include the subject matter of the canceled claims and to even more clearly recite Applicant's invention. No new matter has been added.

II. Rejections

Staudinger Reference

Claims 61-65 stand rejected under 35 U.S.C. § 102(b) as allegedly anticipated by Staudinger et al. J. Biol. Chem., 1997, 272(51), 32019-24 ("Staudinger"). Applicant respectfully traverses the rejection because Staudinger fails to teach or suggest all of the claim elements as required under the anticipation standard.

Staudinger merely reports that the PDZ domain-containing PICK1 and PICK 1-like proteins bind to a previously unidentified region of PKCα. The Office Action appears to suggest that the PICK1 protein is an example of a parent neutralizing agent while the PCKα is an example of a parent target according to the present claims. Although Staudinger shows that PICK1 binds with PKCα, there is little else in the reference that teaches, let alone suggests, the coevolution methods for countering resistance.

Staudinger fails to teach or suggest "selecting one or more next generation neutralizing agents … from diversified populations … wherein the selected one or more neutralizing agents … have improved neutralizing activity. In Staudinger, PKCα (i.e., target) is "diversified" into PCKα mutants (i.e., next generation targets), some of which fail to bind (i.e., have improved resistance) to PICK1 (i.e., parent neutralizing agent). Additionally, PICK1 can be said to have been "diversified" into PICK1 mutants (i.e., next generation neutralizing agents), but none of these PICK1 mutants are "selected" as required in the claims. In order for there to be a "selection," an experiment testing the binding of PICK1 mutants with PKCα mutants needs to have been reported. However, Staudinger reports no such experiment and there is no suggestion that such an experiment should be carried out because a binding experiment between PICK1 mutants and PKCα mutants would not have yielded the type of information the authors were

seeking, namely the binding properties of native PICK1 with native PKCα. The claim requires that "the improved neutralizing activity of the neutralizing agent counters the improved resistance of the parent target" (emphasis added). The fact that Staudinger fails to report a binding experiment between mutants means that Staudinger fails to teach improved neutralizing activity and, thus, fails to teach a method of countering resistance (i.e., countering the inability of PICK1 to bind to a PKCα mutant by selecting a PICK1 mutant that does). Accordingly, the methods of the claims are not taught or suggested.

Staudinger also fails to teach or suggest a neutralizing agent having broad neutralizing activity as recited in claim 63. The Office Action incorrectly suggests that PKCα and PKC7 are different proteins, and the binding of PICK1 to both indicates broad neutralizing activity. Staudinger clearly sets out that PKCα and PKC7 are merely different names for the same protein (page 32021). Accordingly, binding to only one protein does not show broad activity.

In the Advisory Action mailed October 29, 2007, the Examiner indicates that Applicant improperly relies on features of the invention that are not recited in the claims to show novelty. Applicant respectfully disagrees because all of the necessary features of the invention were originally and are currently recited in the claims. The claims indicate that a next generation neutralizing agent is selected with improved neutralizing activity. This can only be done when it is tested against a next generation target having improved resistance to the parent neutralizing. Thus, the claim needs at least one step where there is a mutant tested against a mutant (e.g., next generation neutralizing agents tested against next generation targets). This has been and is currently recited in the "selecting" steps of the invention. One cannot make a selection without doing the appropriate screen. The screen that the Examiner contends was absent in the claims actually was not, because the selecting step required it. Nevertheless, Applicant has amended the claims to even more clearly recite the invention by splitting out individual steps that were originally presented in combined form. Applicant respectfully points to Figure 3 and paragraph [0121] in the specification to help illustrate the steps of the claim.

In view of the above discussion, Staudinger fails to teach each and every element of the claimed invention. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of the claims under 35 U.S.C. § 102(b).

Rosin, Eaton, Karrer References

Claims 61-64 and 66-69 stand rejected under 35 U.S.C. § 102(b) as allegedly anticipated. Applicant respectfully traverses because Rosin et al., PNAS 96: 1369 (1999); Eaton et al. U.S. Pat. No. 5,723,289, and Karrer et al. WO 2001/032712 each fail to teach or suggest all the elements of the claims.

The currently amended claims indicate that the parent neutralizing agent is a protein containing a PDZ domain. None of the Rosin et al., Eaton et al., or Karrer et al. references teach or suggest proteins containing a PDZ domain and, thus, they fail to anticipate the invention of the current claims. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of the claims under 35 U.S.C. § 102(b).

III. Conclusion

Applicant believes that the amendments and arguments herein place the application in condition for allowance and respectfully request allowance.

Applicants hereby request a three-month extension of time and authorize the PTO to apply the necessary fees or any other charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: February 6, 2008

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